

ABSTRACT OF THE DISCLOSURE

A positioning anchor is provided for a stent-graft for implantation to treat a damaged body lumen. The positioning anchor is generally tubular surrounding a primary fluid conduit. Arms extend laterally from the generally tubular structure of the anchor surrounding lateral fluid conduits. The form of these arms is preferably custom configured to match a particular patient's luminal geometry. The anchor thus fits within the luminal geometry to remain in a desired fixed position for implantation of the anchor and any stent-graft coupled to the anchor. The anchor is most preferably formed with two walls having a void therebetween which can be filled with fixation media to further secure the anchor at the desired implantation site. A lumen shaper balloon and delivery catheter are also disclosed for proper delivery, expansion and inflation of the positioning anchor and stent-graft elements according to this invention.